



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RBT200078-1
Job Sheet 186775



11332
Dec 20

Part No: RBT200078-1

Job Qty: 4 ea

Part Name: Trunnion Bolt (Hex Head Cap Screw)



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 11/21/18

Job Tracking No:

Due Date: 12/14/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBT200078 Rev. 2A IPP Rev. A 18.07.10 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	4 Ea		12/14/18	0.00	0.00	Start Up Machining-4		FEED 12-11-29
100	Lathe Conv	4 pcs		12/14/18	0.25	0.33	Lathe Conv-2		FEED 12-11-29
110	QC	4 pcs		12/14/18	0.00	0.00	QC2 Machining-5		FEED 12-11-29
120	QC	4 pcs		12/14/18	0.00	0.00	QC8 Machining-5		FEED 12-11-29
130	Outsource	4 pcs		12/14/18			GRO002-VC	10	CT 18-12-3
140	Packaging	4 pcs		12/14/18	0.00	0.00	Packaging2		DEC 17 2018
150	QC	4 pcs		12/14/18	0.00	0.00	QC6		38
160	Packaging	4 pcs		12/14/18	0.00	0.00	Packaging3-2		DART 12-18
170	QC21-SA	4 Ea		12/14/18	0.00	0.00	QC21		DART

Part Op 100 - 1-Machine as per DWG. Remove 0.300" of thread and machine end of bolt. 2-Deburr
Descriptions: 130 - Issue P/O to GROUPE ALTECH; PO 041986 -Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; Steel -Certificate of Conformity is required
140 - Receive
160 - Bag and tag

GA150B

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
92865A221	TBD	4 Ea (1 ea)	90-Start up Operation	S131325 S093337

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	92865A221	4	8	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

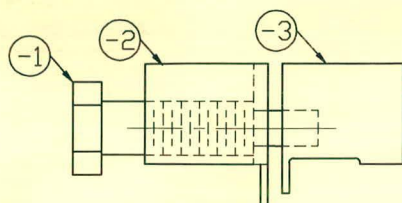
WORK ORDER NON-CONFORMANCE / UPDATE



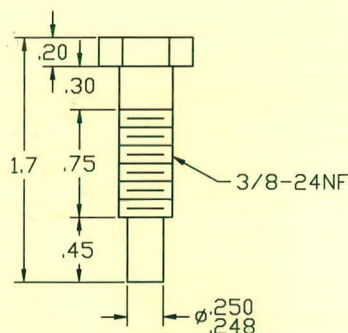
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Suspend ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____		Step #: _____		 Container No: S133365 Part: RBT200078-1 Job No: 186775 Serial No/Batch: S133365 Revision: 2A Inspector: _____ Exp Date: _____ Instructions: _____ Date: 11/29/18			
Description Work Order Devia							
Root Cause		CAUSE CATEGORY					
Environment ☐	No Re-verification ☐	Press ☐					
Design ☐	Operator ☐	Bending ☐					
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐		Positioned Wrong ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐		Outside Dimensions ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Weld ☐	Over/Under tolerance ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Wrong Stock Pulled ☐	Part Incorrect ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Out of Sequence ☐	Part Lost/Missing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Off-set ☐	Part Moved ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Misaligned ☐	Drawing ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Fit/Function ☐	Finish ☐		
Past Expiry Date ☐	Manufacturing Process ☐			Misaligned/off center ☐	Misread ☐		
Misidentified ☐	Past Due ☐	OTHER : _____			Turning Sequence ☐		



ASSEMBLY VIEW

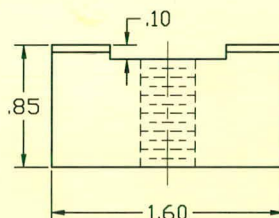
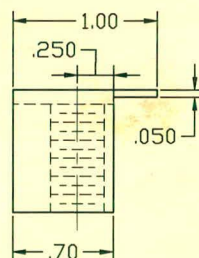
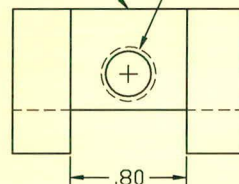


(1)

BOLT

3/16 TEXT "RBT200078"

DRILL & TAP
3/8-24NF THRU



(2)

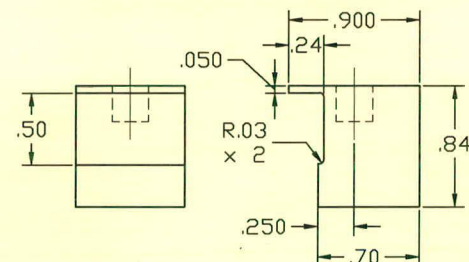
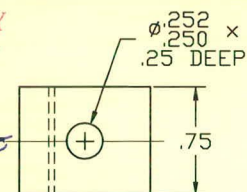
BODY

HEAT TREAT 35-40 Rc

ASSY QTY	QTY	B/D	PART #	UNIT QTY	DESCRIPTION	MAT.	B/D INFORMATION OR SPECIFICATIONS
		W/D	-1	1	HEX HEAD CAP SCREW	BLACK	3/8-24 x 1-3/4
			-2	1	BODY	4140	1 x 1-1/4 x 1-3/4
			-3	1	SPREADER	4140	1 x 1-1/4 x 7/8
ASSY							

REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	CHANGED BOLT PIN FROM #247, AND -3 HOLE FROM #250; ALSO CHANGED P/N FROM T200078	8/16/06	WP	-
2	ADDED NEW TITLE BLOCK, BOM, & REVISIONS TABLE, AND ASSEMBLY VIEW. ALSO CHANGED MATERIAL DESCRIPTION FROM 1 in. WIDE.	3/6/08	WP	RW
2A	CH'D BOM LENGTH FROM 13/16 TO 7/8 -3 PER R.W.	12/17/10	RJC	RW

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *1867 HMC*
1871-21



(3)

SPREADER

HEAT TREAT 35-40 Rc

RED BARN MACHINE		TITLE	
		TRUNNION BEARING REMOVAL AND INSTALLATION WORK AID	
DWG NO.		REV	
RBT200078		2A	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAWN BY: COLE	
TOLERANCES ON: DECIMALS .XXX ± .005 FRACTIONS ± 1/32 .XX ± .01 ANGLES ± .5°		APPROVED <i>D. Wed</i>	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		HEAT TREAT LISTED BY PART FINISH BLACK OXIDE USED ON MODEL	
SCALE NTS DATE 10-15-01		BELL 204, 205, 206, 212	
SHEET 1 of 1			



Dart Aerospace Ltd.
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Hawkesbury, ON
K6A 1K7
Canada

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PURCHASE ORDER **PO041986**

Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

PO No: PO041986
PO Date: 12/7/18
Due Date: 12/17/18
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Tsimiklis, ChrisoulaPhone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 60
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	186298	RB6872879-3	Counterbore Cutter -Issue P/O; -Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; -Certificate of Conformity is required	Firmed	-	12/17/18	1 pcs	0 pcs	1 pcs	\$5.454545/pcs	\$5.45
2	185122	RBE117-12020-W20-3	Cup -Issue P/O to GROUPE ALTECH; PO -Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; 4140 -Certificate of Conformity is required	Firmed	-	12/17/18	4 pcs	0 pcs	4 pcs	\$5.454545/pcs	\$21.82

DEC 17 2018



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PURCHASE ORDER **PO041986**

Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	185131	RBE117-68021W5-1	Plate -Issue P/O to GROUPE ALTECH; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; 4140 -Certificate of Conformity is required	Firmed	-	12/17/18	8 pcs	0 pcs	8 pcs	\$5.454545/pcs	\$43.64
4	186775	RBT200078-1	Trunnion Bolt (Hex Head Cap Screw) -Issue P/O to GROUPE ALTECH; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; Steel -Certificate of Conformity is required	Firmed	-	12/17/18	4 pcs	0 pcs	4 pcs	\$5.454545/pcs	\$21.82
5	185467	RBE1120-31502W1-9	Pin -Issue P/O to GROUPE ALTECH; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; O1 -Certificate of Conformity is required	Firmed	-	12/17/18	5 pcs	0 pcs	5 pcs	\$5.454545/pcs	\$27.27
Grand Total:										\$120.00	

DAS
38
9-89

DEC 17 2018

4 X

[Signature]

[Signature]



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PURCHASE ORDER PO041986

Order Notes

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable)

A022 Apical Processing

A024 process certifications

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

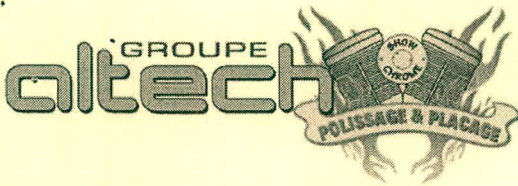
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 12/12/18 12:31 PM dart.tsimiklis.chrisoula



Certificat de Conformité / Certificate of Compliance

(015184-2)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

015184 - 2

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
12-Dec-2018		Aman		041986				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
4	RBT200078-1 Rev.	RBT200078-1 01 -OXIDE-BLK & OIL [OXIDE BLACK AND OIL] MIL-C-13924C CLASS 1 APPLY A THIN LAYER OF OIL MIL-PRF-16173 GRADE 3 CLASS 1 WIPE OFF EXCESS	BLACK-OXIDE CH	4	4	0	0	0

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness
Inspecteur Qualité
Quality Inspector
Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.

